

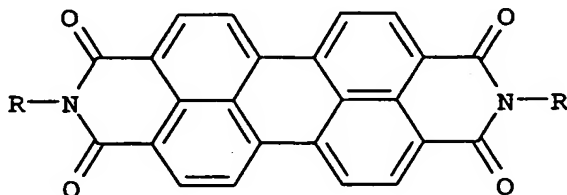
Preparation of perylene-3,4:9,10-tetracarboxylic diimides and perylene-3,4:9,10-tetracarboxylic dianhydride and also of naphthalene-1,8-dicarboximides

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Abstract

A process for preparing perylene-3,4:9,10-tetracarboxylic diimides of the general formula I

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where

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R is C₁-C₃₀-alkyl whose carbon chain may be interrupted by one or more -O- moieties and/or which may be substituted by one or more substituents selected from the group consisting of C₅-C₈-cycloalkyl (which may be substituted by one or more C₁-C₆-alkyl substituents), phenyl or phenyl-C₁-C₆-alkyl (which may each be substituted by one or more C₁-C₁₈-alkyl and/or C₁-C₆-alkoxy substituents), -OCOR¹, -N(R¹)₂, -SO₂NH₂, -SO₂N(R¹)₂, -CON(R¹)₂ and -COOR¹;

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C₅-C₈-cycloalkyl whose carbon skeleton may be interrupted by one or more moieties selected from the group consisting of -O-, -S- and -NR²- and/or which may be substituted by one or more C₁-C₆-alkyl substituents;

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phenyl, phenyl-C₁-C₆-alkyl, naphthyl or hetaryl, which may each be substituted by one or more substituents selected from the group consisting of C₁-C₁₈-alkyl, C₁-C₆-alkoxy, phenylazo, naphthylazo, pyridylazo, pyrimidylazo, cyano, -N(R¹)₂, -CON(R¹)₂ and -COOR¹;

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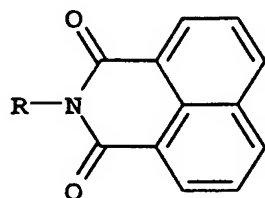
R¹ is C₁-C₆-alkyl, C₅-C₈-cycloalkyl, phenyl or phenyl-C₁-C₆-alkyl;

R² is C₁-C₆-alkyl, phenyl or phenyl-C₁-C₆-alkyl,

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by dimerizing a naphthalene-1,8-dicarboximide of the formula II



II

comprises effecting said dimerizing in a reaction medium consisting essentially of an apolar aprotic organic solvent and an alkali metal base and subsequently reoxidizing the resulting alkali metal salt of the leuco form of the perylene-3,4:9,10-tetracarboxylic diimide in the presence of a polar solvent,

and also preparation of perylene-3,4:9,10-tetracarboxylic dianhydride and naphthalene-1,8-dicarboximides.